

Supplementary information

Occupational exposure to multi-walled carbon nanotubes during commercial production synthesis and handling.

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Table S1: Detailed results personal measurements production area during handling period.

Date	Personal ID	OC µg/m ³	EC1 µg/m ³	EC2 µg/m ³	EC3 µg/m ³	Inhalable CNT+BC (EC2+EC3) µg/m ³	Background µg/m ³	Inhalable CNT µg/m ³
28-05-2013	1	353.8	87.7	126.6	48.8	175.37	1.90	173.47
	2	65.3	19.2	16.0	2.3	18.23	1.90	16.33
	3	1805.7	484.1	432.5	20.7	453.21	1.90	451.31
	4	45.0	11.9	13.2	6.0	19.24	1.90	17.34
	5	50.5	8.2	5.3	1.3	6.60	1.90	4.70
	6	42.9	10.1	25.2	2.7	27.95	1.90	26.05
	7	118.1	66.0	35.3	3.0	38.33	1.90	36.43
29-05-2013	1	113.1	34.3	410.9	776.3	1187.22	0.70	1186.52
	2	77.3	25.4	30.2	3.6	33.80	0.70	33.10
	5	50.5	13.1	16.7	2.6	19.29	0.70	18.59
	4	22.2	2.6	1.8	0.3	2.13	0.70	1.43
	6	48.7	13.4	20.8	2.5	23.28	0.70	22.58
	7	82.9	28.8	19.0	2.5	21.44	0.70	20.74
	30-05-2013	1	78.9	27.4	277.5	114.3	391.87	0.80
2		76.7	36.5	187.9	68.7	256.61	0.80	255.81
5		112.7	52.1	239.6	64.7	304.32	0.80	303.52
4		92.8	27.7	12.5	1.1	13.62	0.80	12.82
6		56.3	16.6	9.8	1.2	11.03	0.80	10.23
7		57.7	20.7	37.1	11.2	48.25	0.80	47.45

20 Table S2: Detailed results personal measurements production area during synthesis period.

Date	Personal ID	OC $\mu\text{g}/\text{m}^3$	EC1 $\mu\text{g}/\text{m}^3$	EC2 $\mu\text{g}/\text{m}^3$	EC3 $\mu\text{g}/\text{m}^3$	Inhalable CNT+BC* $\mu\text{g}/\text{m}^3$	Background $\mu\text{g}/\text{m}^3$	Inhalable CNT $\mu\text{g}/\text{m}^3$
07-10-2013	3	72.7	12.9	79.8	27.0	106.9	5	101.9
26-11-2013	6	66.4	14.5	35.0	4.6	39.62	1	38.62
	3	24.9	4.1	3.7	1.4	5.11	1	4.11
	8	97.9	19.5	35.5	12.4	47.90	1	46.90
27-11-2013	4	57.8	13.2	12.6	2.3	14.84	2.9	11.94
	1	32.3	5.9	13.9	5.3	19.21	2.9	16.31
	5	33.3	8.9	13.2	4.8	17.98	2.9	15.08
	7	95.7	26.4	25.2	37.2	62.37	2.9	59.47
	9	58.3	12.1	12.5	5.5	17.95	2.9	15.05
	10	50.8	9.9	16.5	8.0	24.47	2.9	21.57
	2	202.1	59.4	189.2	71.3	260.47	2.9	257.57
28-11-2013	4	71.1	23.1	79.8	31.1	110.81	5.7	105.11
	1	122.9	39.8	234.2	62.9	297.04	5.7	291.34
	5	40.8	9.0	14.7	6.4	21.10	5.7	15.40
	10	60.9	12.1	12.2	1.3	13.53	5.7	7.83
	2	103.1	33.5	47.6	32.9	80.52	5.7	74.82
	9	87.7	24.7	32.7	5.6	38.32	5.7	32.62
	7	145.8	36.4	51.9	27.3	79.20	5.7	73.50
	11	38.4	8.8	13.4	12.8	26.15	5.7	20.45
	8	110.0	30.4	173.3	57.6	230.88	5.7	225.18
29-11-2013	5	72.2	24.4	74.5	23.6	98.08	10.2	87.88
	4	129.6	39.0	53.8	14.2	67.96	10.2	57.76
	3	548.2	76.9	237.9	15.5	253.38	10.2	243.18

Table S3: Detailed results personal measurements R&D area.

Date	Personal ID	OC $\mu\text{g}/\text{m}^3$	EC1 $\mu\text{g}/\text{m}^3$	EC2 $\mu\text{g}/\text{m}^3$	EC3 $\mu\text{g}/\text{m}^3$	Inhalable CNT+BC* $\mu\text{g}/\text{m}^3$	Background $\mu\text{g}/\text{m}^3$	Inhalable CNT $\mu\text{g}/\text{m}^3$
29-05-2013	12	94.6	10.6	37.0	7.4	44.44	1.4	43.04
	13	17.0	2.3	1.3	0.3	1.57	1.4	0.17
	14	53.1	14.7	4.7	0.8	5.57	1.4	4.17
	15	326.2	84.2	26.4	3.1	29.49	1.4	28.09
	16	33.0	5.4	3.6	1.1	4.64	1.4	3.24
	17	29.9	4.4	1.6	0.3	1.84	1.4	0.44
30-05-2013	16	90.8	32.3	49.7	10.0	59.70	0.2	59.50
	12	56.6	10.8	7.6	2.7	10.33	0.2	10.13
	18	56.4	13.4	4.7	0.8	5.51	0.2	5.31
	17	32.1	3.6	1.2	0.3	1.43	0.2	1.23
	19	66.9	12.5	4.1	0.6	4.76	0.2	4.56

25 Table S4: Detailed results personal measurements offices.

Date	Personal ID	OC $\mu\text{g}/\text{m}^3$	EC1 $\mu\text{g}/\text{m}^3$	EC2 $\mu\text{g}/\text{m}^3$	EC3 $\mu\text{g}/\text{m}^3$	Inhalable CNT+BC* $\mu\text{g}/\text{m}^3$	Background $\mu\text{g}/\text{m}^3$	Inhalable CNT $\mu\text{g}/\text{m}^3$
27-11-2013	20	38.7	4.6	3.2	6.7	9.94	1.2	8.74
	21	36.0	5.9	4.5	7.2	11.71	1.2	10.51
	22	52.1	7.7	7.6	3.4	10.94	1.2	9.74
28-11-2013	23	49.6	9.0	3.3	2.3	5.56	1.2	4.36
	22	56.2	7.3	4.4	1.5	5.87	1.2	4.67